Remarks

Reconsideration of this Application is respectfully requested in light of the following remarks because the present application in condition for allowance, or in the alternative, better form for appeal. New claims 8 – 11 have been added. It is believed that claims are fully supported by the specification as filed.

In the present application, claims 1, 3 – 5, 8 – 11 are pending, with claims 1 and 8 being the independent claim.

Attached hereto is a marked-up version of the changes made by the current Amendment. The attachment is captioned "**Version with Markings to Show Changes Made**."

Rejections Under 35 U.S.C. § 103

On page 2 of the Office Action, the Examiner rejected claims 1 and 3-5 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,191,837 issued to Fujimaki *et al.* ("Fujimaki") in view of Japanese Kokai No. 57-613 of Ogawa *et al.* ("Ogawa") or Japanese Kokai No. 3-69917 of Kondo *et al.* ("Kondo"). Applicants submit that amended claim 1 and its dependent claims 3-5 are patentable over the references of record.

Newly amended claim 1 recites a liquid crystal display, wherein liquid crystal molecules are homogeneously aligned near the spacers.

None of the references nor the combinations thereof disclose or suggest such features. Therefore, amended claim 1 is pantentable over the references of record. Likewise, claims 3-5 that are dependent from claim 1 are also patentable over the references of record.

In the same manner, new claim 8 also recites a liquid crystal display, wherein liquid crystal molecules are homeotropically aligned near the spacers.

None of the references nor the combinations thereof disclose or suggest such features. Therefore, new claim 8 is patentable over the references of record. Likewise, claims 9-11 that are dependent from claim 8 are also patentable over the references of record.

Furthermore, as disclosed in the description, the present invention achieved a great increase in the contrast ration, such as 47.4% and 70% increase.

As such, claims 1, 3 – 5 and 8 – 11 are all patentable over the references of the record. It is, thus, respectfully requested that all the outstanding objections and rejections over claims 1, 3 – 5 and 8 – 11 be withdrawn and pass those claims to allowance.

Conclusion

Applicants respectfully submit that the foregoing remarks demonstrate that entry of these amendments places the present application in condition for allowance, or in the alternative, better form for appeal. All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment is respectfully requested.

Respectfully submitted,

Michael J. Bell
Registration No. 39,604

Date: May 7, 2001

HOWREY SIMON ARNOLD & WHITE, LLP
Box No. 34
1299 Pennsylvania Avenue, NW
Washington, DC 20004-2402
(202) 783-0800

VERSION WITH MARKINGS TO SHOW CHANGES MADE

Amendments

In the specification

Please kindly enter the following amendment:

Page 6, line 9 change "bear" to – bare –.

In this test, the size of the test panels was 15.1 inches. A [bear] glass panel without TFTs and wires and a color filter panel having complete elements such as color filters and a black matrix was used. Spacers of 2 g and solution of 200 ml including IPA (isopropyl alcohol) of 80ml, Me-OH of 20ml and DI (de-ionized) water of 100ml were mixed and sprayed on one of the panels using the conventional dispersing method. The spacers used in this test were "LUNAPEARL" which are manufactured by KAO, a Japanese company using a seed polymerization method, and are a copolymer including di-vinyl benzene as a primary component. The aligning tendency of the spacers is dependent on the amount of hydrophilic and hydrophobic components of the copolymer, and becomes homeotropic as the amount of the hydrophobic components increases. The number of the spacers per unit area was 120 /mm^2.

In the claims

Please amend claim 1 as follows and add new claims 8-11.

1. (Twice amended) A liquid crystal display, comprising:

a first panel having a first electrode and a second electrode that are separated from each other and generate electric field by applying voltage;

a second panel spaced apart from said first panel;

a liquid crystal layer interposed between said first panel and said second panel, wherein liquid crystal molecules are aligned substantially parallel to said first panel and said second panel; and

a plurality of spacers dispersed in the liquid crystal layer,

wherein [the spacers align] liquid crystal molecules are homogeneously aligned near the spacers [in a substantially regular manner with respect to surfaces of the spacers].

8. (New) A liquid crystal display, comprising:

a first panel having a first electrode and a second electrode that are separated from each other and generate electric field by applying voltage;

a second panel spaced apart from said first panel;

a liquid crystal layer interposed between said first panel and said second panel, wherein liquid crystal molecules are aligned substantially parallel to said first panel and said second panel; and

a plurality of spacers dispersed in the liquid crystal layer,

wherein liquid crystal molecules are homeotropically aligned near the spacers.

9. (New) The liquid crystal display of claim 8, further comprising a pair of polarizers attached to the outer surfaces of the first and the second panels, wherein polarizing directions of the polarizers are substantially perpendicular to each other.

10. (New) The liquid crystal display of claim 9, wherein the spacers align the liquid

crystal molecules near the spacers substantially parallel to surfaces of the spacers.

11. (New) The liquid crystal display of claim 9, wherein the spacers align the liquid crystal molecules near the spacers substantially perpendicular to the surfaces of the spacers.